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ABSTRACT

This study examined the justifications that Finnish student teacher supervisors gave regarding their advice and guidelines used in teaching practice, referring to the advice as teaching recipes. Both supervisors and student teachers were asked for information on justifications. Justifications were collected via questionnaires and interviews over one academic year during different phases of student teaching. Respondents were asked to describe recipes they had used themselves or had observed being used. They were also asked if the teaching recipes had been justified and what purposes were involved in the supervisory process. Recipes, advice, and guidelines were commonly used, although respondents tended to deny the fact at first. The justifications noted by supervisors were either rational and intuitive or a combination of both. About 65 percent of student teachers said that the advice and guidelines they had received were very useful, and 25 percent said they were useful to varying degrees. Thoroughness and accuracy of supervision and the expression of positive aspects contributed to making students' attitudes toward the recipes positive. Students considered recipes more useful if they were clearly tied to students' personalities and if they directly related to how students acted. (Contains 40 references.) (SM)

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Some findings of teachers' pedagogical thinking

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Teaching recipes and mixed patterns of justification

Some findings of teachers' pedagogical thinking

Riitta Jyrhämä

This article deals with the justifications that supervisors give to their advice and guidelines used in teaching practice. In this context the advice is called teaching recipes! People in general – not only teachers – give advice to other people. As a rule, they do not give any justifications if they are not specifically asked for. This piece of research set out to ask the supervisors as well their students for justifications. These justifications were collected during one academic year in ordinary teacher education contexts, in different phases of teaching practice. The justifications brought up by the supervisors turned out to be both rational and intuitive or a combination of both. Now the aim is to clarify teachers' pedagogical thinking by asking for justifications underlying their decisions.

Teaching practice: the meeting place for descriptions and prescriptions

Teaching practice is important for the development of pedagogical thinking

Students have a very high opinion of teaching practice as part of teacher education, even before they have started their studies. Although they have high expectations, teaching practice periods are often quite stressful experiences for students. Sometimes they also find certain aspects of supervision annoying. There's an old Finnish saying *If it doesn't kill you, it must make you stronger.* A corresponding comment to the same effect can be found in a student's statement: *'And eventually, you get used to the system.'* Supervisory situations in teaching practice nearly always involve elements that have the potential of annoying not only the student but also the supervisor. They can rise from a multitude of situations. The students can think that teaching practice is an experience of going through a sort of supervisory mangle. Teaching practice makes the students to go through a developmental process which puts them under a considerable strain. Thus the student teachers don't like comments 'Quite a nice lesson'; they expect a little bit more from supervision. Although teaching practice is demanding, students usually rank it highest and feel that they have got the most benefit from it in view of their future profession. According to Uusikylä (1990, 87), the students value particularly highly the work-related practical study periods and teaching forms. The role of the supervisors was central in teaching practice. A degree of freedom in planning was felt to be positive, but the type of advice stating 'it's ok, go on the same way' was not liked if it was not combined with concrete recipes for developing teaching (op.cit. 208). The research, how-

ever, elicited the opinion that teaching practice gave the students the most important instruments for professional life. The beneficial effect varies in relation to the student's personal characteristics and the supervision received (op.cit. 205-206).

Supervising the students to think for themselves is a method typical of an expert, i.e., the skill to direct the student's interest to such points as are relevant to teaching. Skilled people are more able to concentrate on essential points and to find the gist of the matter compared to the less skilled. (Saariluoma, 1997, 122). Furthermore, the supervisor has to be able to justify the advice and guidelines s/he has given and to demonstrate the intentionality behind them. By way of example, Hawkey's analysis of the supervisory conferences between the supervisor and the student during teaching practice, shows that the supervisor's speech consisted mostly of giving advice and guidelines or information, but nearly as much of urging the student to develop her/his own thinking. (Hawkey, 1998, 336-338).

One of the educational aims of teacher education is to provide substance for independent thinking and tolerance as well as toleration. From this point of view, it can be considered worth aiming at that all along the educational process the student meets situations where s/he gets contradictory knowledge and has to make up her/his own mind. This helps to develop the reflective skills and gives the student the opportunity to encounter the kind of situations s/he is bound to meet when working in the field. Clarke (1995) states that the role of the supervisors is not so much to list things for the students to reflect on but rather to offer an assortment of different angles from which the student can analyze her/his own teaching. These different angles are partly realized through different supervisors.

Competent teachers working in the field seem to remember some points from their teaching practice for the rest of their lives. A piece of advice may stick in the student's mind, either as something particularly positive or as something particularly negative. It is amazing to see what kind of minute details are sometimes remembered from the comments of teaching practice supervisors, even after several decades. In conversations dealing with the experiences of student years, the things best remembered are most often connected with teaching practice in particular, not so much with theoretical studies. This is understandable in view of the fact that the focus of teaching practice is continuously on the student, and her/his work rests not only on her/his knowledge and skills but on her/his personality as well, and that is where sensitivities come to play a role. When the adequacy of both factual knowledge and skills acquired during teacher education was examined, in an investigation carried out by R. and Y. Yrjönsuuri (1995), some 90 per cent of all the teachers answered that teacher education had taught them how to plan lessons well or very well. This was considered the best practical result of teacher education. Learning how to plan lessons is essential during teaching practice, the obvious usefulness of teaching practice being thus verified. Earlier, teaching practice was more central to the teacher education than it is today. The proportion of teaching practice has continued to diminish in teacher education as a whole. The current teacher education offered in Helsinki includes 15 study weeks of practicum studies, while the whole master's degree includes 160 study weeks.

With regard to the curriculum and the division of work, the different groups of supervisors should have a slightly different idea of their own work so that their individual professional profiles can be benefited from and, on the other hand, to avoid unnecessary overlapping in supervision. The groups of supervisors consist of 1) class teachers in university practice schools and in field schools, 2) specialist supervisors (supervisors in a single subject/a group of closely related subjects) and 3) generalist supervisors (lecturers in educational theory, with a holistic view of pupils and classroom activities).

McNamara (1995) states that in teaching practice supervision the task of the field teachers has been the giving of practical advice connected with classroom situations and the curriculum and the university supervisors have been responsible for professional development and for presenting alternatives.

From descriptions to prescriptions in teacher education

The fact that practical teaching situations give students an opportunity to put theoretical studies to a practical test may be one of the reasons behind the high evaluation of teaching practice periods. Both theory and practice are as essential and as meaningful parts of teacher education.

The practice phases of teacher education evolve from the purpose stated in the curriculum of an educational unit. Purposiveness may have a unifying effect on teaching practice supervision depending on how fully the supervisors have internalized the purpose. Hytönen (1996; 1995; 1982) has described the development of Finnish teacher education, especially the educational decisions made in the Department of Teacher Education at the University of Helsinki and the role of teaching practice in its teacher education. The educational model is aimed at finding a balance between theoretically and practically oriented studies. The aim of teaching practice has been to provide the student with the skills of a pedagogically thinking teacher. This has been intertwined with the formation of concepts, i.e., providing the future teacher with language. The concepts have been given by the theoretical studies in education, and they have been aimed at analyzing and organizing the experiences and impressions acquired during teaching practice. Hytönen emphasizes the fact that the meaning of these concepts has to be exact and their level of abstraction sufficiently high. From that point of view, theoretical studies have enabled the student to learn how to find justifications and how to defend the decisions made. (Hytönen, 1982, 32-33.) General principles on integrating theoretical studies and teaching practice are the following: the integration process should proceed from individual aspects of teaching to the whole module; the curriculum of the degree programme should specify the theoretical studies applied in connection with the practice periods; practice should start as early as possible; the interaction between theoretical studies and teaching practice should be continuous; and practice in university training schools and municipal field schools should alternate in a meaningful way (Hytönen, 1996, 5-6).

In the Helsinki Department of Teacher Education, the development of the teacher's pedagogical (or didactic) thinking has been a focus both in research and in practice. Fundamental to the development of pedagogical thinking, according to Kansanen (1990, 128-129), is the fact that the realization of the nature of normativity and description deepens the teacher's pedagogical thinking. Understanding the difference between statements of opinion and fact is crucial to the development of the teacher's pedagogical thinking and as such a prerequisite for a critical and independent approach to work. In pedagogy the issue of normativity can either be totally passed over or not considered problematic. The attitude depends on the specific approach inherent in the theoretical background of a given pedagogical school of thought. The normativity of pedagogy is mainly related to two characteristics: the definition of the purpose of education and teaching and the recipes given for practical education. The intentionality involved in purposiveness and its concrete teaching recipes are the prescriptions of education: practical statements that can be considered a norm, a recommendation or even a demand for a certain kind of action. Prescriptions or normative statements are not included in scientific theories. Theory is understood as a description of a subject, and de-

scriptions then describe observable and conscious characteristics. The normativity of pedagogy or prescriptions can eventually be investigated by means of descriptive pedagogy.

Educational activities always have goals, be they conscious or unconscious. That's why all teaching, supervision and education is normative. Teaching has always been preceded by decisions: what to teach, how to teach, who teaches etc. After decision-making the thing is no longer descriptive, it becomes normative. In the educational context this means pedagogical thinking. Of particular interest is how teachers justify their decisions and the reasons they give for their actions. Normative principles are used to explicate and understand reality. Adherence to the norms can be blind or conscious. Blind adherence implies blind acceptance of the norms. If the validity and restrictions of the norms are questioned, it is a case of a conscious attitude to the norms and thus implies a higher level of theoretical self-understanding than blind acceptance of the norms. The conscious consideration of the basis of one's own thinking and actions is reflective thinking which is again a process, and as such teachable. This involves a critical attitude. Even so, it is worth noting that a critical or reflective attitude towards scientific rules and principles does not exclude adherence to them or scientific development if those rules and principles prove resistant to criticism. (Juntunen & Mehtonen, 1977, 10-17.) This can be applied to the advice and guidelines given in the context of teaching practice supervision: they are of value if they prove to be relevant to the recipient by way of independent evaluation and empirical evidence.

One particular point of views is to question how teachers move in their thinking from the descriptive to the normative (Kansanen, 1993). The idea is that when the teacher makes a decision, it is no more a descriptive consideration, but instead, it becomes normative at the very moment the decision is made. The teacher may have a thoroughly systematic thinking-base for her/his decisions, but in practice, a teacher's work is constantly making educational decisions. There s/he must take stands and evaluate all the time what s/he is doing. It may be unconscious, too, but nevertheless it is normative in some respect. It is important that when the teacher works s/he cannot avoid thinking, reflecting, pondering or contemplating her/his decisions in some way. What happens in this process, or how the decisions are made, and especially how they are justified, is of particular interest. The teacher's background thinking becomes concrete in the very justifications s/he uses.

Supervisors' practical knowledge

The recipes as such are not the main point of interest in this research, since they vary according to the giver and the situation. Making use of them requires the ability to apply them. Instead, it is more interesting to try to find out the basis for a teacher's recipes: from theoretical studies of from the practical theories evolved from her/his own experiences.

Irrespective of educational statements, the common supervisional basis may have remained in the background and supervision becomes dominated by each supervisor's own implicit theories. Teaching practice supervision is interactive and it is natural that it comes to include a large variety of personal elements from both participants - the way of thinking, dealing with information, the way of learning, values, norms, experiences, beliefs etc. Also, the justification for actions and the basis of argumentation depend on the participants' personal way of acting and thinking. Supervision is considered positive as such and even teaching practice supervision can be seen as mentoring. When the effects of programs for improving working conditions have been studied, the

method where a senior colleague advises her/his juniors has been found positive as a rule (Firestone & Pennell, 1993).

An older and more experienced colleague, i.e., the teaching practice supervisor as a teacher, has formed her/his own knowledge base of pedagogical thinking. In Elbaz's terms, this knowledge base of a teacher is practical content knowledge which she further describes as a dynamic file with different subfiles comprising the curriculum, the subject, teaching, and school surroundings as well as the teacher. Orientation to practical knowledge can happen by means of the situation or practical work and routines; by means of one's own personality or one's personal way of action; through experience, theory or social context. Structurally, Elbaz (1981, 60-61) analyzes practical knowledge into rules of practicy, practical principles and images with which the teacher constructs and organizes her/his practical knowledge. Rules of practicy in Elbaz's usage are clear and concise recipes for practical teaching situations. With the help of these recipes, the teacher is able to decide which course of action to take in recurring teaching situations if s/he recognizes the type of situation and remembers the relevant piece of advice. Practical principles directing and explicating the teacher's choice of action are more general and are based on reflection derived from practical work experience. Images, in Elbaz 's parlance, are the mental ideas of good teaching and good teachers formed by the teacher. When guided by the images, the teacher acts intuitively rather than analytically.

Carr and Kemmis (1986) state that the ideas of good teaching underlying a teacher's actions consist of practical everyday knowledge or common sense, popular and traditional wisdom, practical know-how, circumstantial knowledge, professional knowledge, and educational knowledge as well as social, moral and philosophical assumptions. Of these, common sense, traditional wisdom and practical know-how have no scientific foundation and yet they are the recourse of an untrained acting teacher. Teacher education brings with it scientific foundation for developing other areas of teaching. One of the aims of combining theory with practice in teacher education is to improve the teacher's pedagogical thinking.

Kansanen (1993) differentiates three levels of pedagogical thinking. On the lowest or action level, the teacher's decisions in a given situation are based on basic teaching skills. On the object level, the events of the action level are analyzed by means of theoretical concepts and models which in turn presupposes a command of both the subject and of educational theory. This is a case of the teacher applying her/his own practical theories. On the metalevel, the previous level is analyzed by focusing on its solutions, syntheses and argumentation. The teacher's practical arguments become more scientific with the higher levels of thinking. Kansanen, Tirri, Meri, Krokfors, Husu & Jyrhämä (2000) have paid special attention to the teacher's decisions and their justifications. Teachers generally justify their decisions both intuitively and rationally, i.e., teachers' pedagogical decisions are based on experiental and theoretical knowledge. Finding justification for action improves the teacher's pedagogical thinking as such.

In addition to theoretical knowledge, the teaching practice supervisors act in accordance to their own rules of practicy, principles and images: They give student teachers guidelines and advice -- which can also be called recipes, tips, rules of thumb etc.-- derived from their own professional lore. They can be either oral or written. In supervison, the advice is normally given as oral instructions by another person. Guidelines and advice offer the student grounds for thought, not a direct path to effective teaching. The teaching situation seems to be so complex to many a beginning teacher that the planning phase in itself takes lots of time. After an intensive pre-interactive phase, the new teacher at the interactive phase may find it difficult to see the reasons why the teaching situation may not work as expected. At the post-interactive phase, when the student

evaluates the work with her/his supervisor, it may be fruitful for the supervisor to mention points to which attention should be paid. The supervisor's personal tone eventually determines how binding the student finds the advice. A supervisory style with an emphasis on detail indicates recipe-like regulation aimed at helping the student move forward from the actual situation. Discussion is typical of a style open to alternative pedagogical solutions. Students form their own conclusions of the given advice based on what they hear. It depends on the individual student how necessary s/he finds the advice given. In addition to pedagogical knowledge, there are also values underlying the advice and guidelines. According to Suoranta (1997, 138), the pursuit of any science which studies man as a cultural being always has to choose its purpose between domination of man or empowerment of man. Advice and guidelines represent normative pedagogy and are inherently evaluative. With the choice of advice, the supervisor makes a pedagogical decision. The decision directs the supervisor's action towards attainable, pedagogically valuable goals. One way of studying the teacher's pedagogical thinking is to clarify the supervisor's action by investigating the advice and guidelines s/he gives. This may be a better approach than interviewing teachers and directly asking them how they justify their decisions. If teachers become conscious of what you are seeking, they usually start to tell you what they think you expect of them.

Teaching recipes as projections of teachers' beliefs of good teaching

What underlies the recipes and how to clarify it?

What I've said so far shows that supervisory discourse during teaching practice is a very natural context to find out something about teachers' thinking. There a supervisor 'thinks aloud', i.e., s/he explicates her/his personal beliefs about good teaching. This article deals with certain factors of teaching practice supervision and seeks to analyze an investigation whose aim was, among other things, to find out how supervisors justify the advice they give for student teachers in teaching practice. The focus is to explicate teachers' pedagogical thinking. One of the aims is to clarify the problems of normativity in the supervisory process. In teacher education, the different phases of teaching practice have their own educational content, the presence of which in teaching practice supervision is studied in the light of the views expressed by the student. The aim is to clarify some characteristics of the problem of normativity and to outline descriptions from prescriptions. The approach is by its nature inductive including 196 supervisors and 230 student teachers. The subjects answered an open questionnaire in which they could report recipes they had used themselves or had observed being used. They were asked, too, if the teaching recipes had been justified and what purposes were involved in the supervisory process. A very interesting finding was that recipes, advice and guidelines are commonly used, although the fact is at first strongly denied. (Jyrhämä 1999a.) In addition to asking the recipes and the justifications behind them, the views of those students in the Department of Teacher Education at Helsinki University who had completed all the teaching practice phases of class teacher education, were investigated by means of a questionnaire (N=55) and an interview (N=6). In the questionnaire students' attitudes towards the advice and guidance, the influence of teaching assessment on their attitudes to supervision and the major differences in the supervision during different practice phases of the curriculum were examined. The reason for choosing the interviewed among the student teachers in their final practice phase was that with the experience of all the practice phases of teacher education completed, they have the prerequi-

sites to evaluate the whole. The part of the research which analyzes students attitudes to supervision has been reported separately (Jyrhämä, in press).

Receptology is an ancient motive in all teaching and teacher education. In spite of idealistic challenges, anonymous recipes, advice, and guidelines are commonly used. Apparently they are rooted so deeply in our belief systems that we use them against our better understanding. These belief systems provide a background for these recipes. The supervisory process is a special context in which the supervisor and the student teacher are compelled to justify their educational decisions. In educational contexts acting means choosing between alternatives. The supervisor makes a decision when s/he chooses between alternatives and advises the student teacher in order to arrive at a certain result. S/he has decided what – after her/his belief – is the best possible way to reach good teaching skills.

Pedagogical thinking is normative – thinking according to certain values. To get to know it is to ask the teacher what arguments lie behind the decisions. It is necessary to find a way to ask what teachers think about teaching and about the teaching-studying-learning process in general, but this should be done in such a practical context that justification would seem to be natural. That is why the idea of using empirically-based guidelines, advice and recipes given by supervisors during the student-teaching program seemed an appropriate method to extract just this kind educational decision-making. This approach was inspired by a text by Meyer (1991, 27-55) and a piece of research conducted in the context of teaching receptology – Rezeptologie (Mitzschke et al., 1984; Alfs et al., 1985). Meyer sees the recipes to be unambiguous operational advice to secure a successful teacher-pupil relationship and positive learning results. The operational advice arises from concrete teaching situations and is universal. It serves classroom routine situations and is not theoretically derived or empirically verified (Meyer 1991, 49).

The quality of teaching recipes

It is interesting to note that the supervisors first said that they do not give direct advice or recipes, but empirical studies have shown quite clearly that it is very common to give recipes and it is equally clear that the student-teachers ask for them (Jyrhämä 1999a; Meri 1998). The recipes as such are not important, but the idea that with the help of recipes it is possible to get into a teacher's mind is important. Knowing what kinds of recipes the supervisors use opens the way to the background of these recipes, and they offer the content basis of questions and discussion where the justification and implicit theories can take place. Advice and recipes are naturally not the only way to get to know how teachers think and make decisions.

Thinking and acting according to the purpose stated in the curriculum is characterized by purposiveness. Making educational decisions with purposiveness in mind looks for arguments and justification in the values in and behind the curriculum. Purposiveness means normative thinking, but the quality of this thinking is determined by teachers' pedagogical expertise. Experts give advice to novices. Some concrete examples of the most favourite teaching recipes are:

- Learn to know your pupils.
- Vary different teaching methods.
- Learn to ask logical questions.
- Give your pupils clear working instructions.
- Vary different illustrating tools.
- Be a friendly, consistent adult.

- Ensure a peaceful working environment in class.
- Guide and motivate the pupils to plan and draw conclusions.

(Jyrhämä 1999a; Kansanen, Tirri, Meri, Krokfors, Husu & Jyrhämä 2000, 124.)

The usefulness of the teaching recipes

When the students who had completed their final teaching practice were asked how useful they found the advice and guidelines which they had received, 65 % of students said, that they were very useful and 25 % found them useful in varying degrees. Only 9 % of students said that they were useless. The usefulness of received advice was mostly associated with epithets like concrete, feasible, matter-of-fact, thought-provoking and applicable in view of future working life. The following comment on the usefulness of advice and guidelines may serve as example of the answers to the questionnaire: *Very useful in the final practice period, the advice has been very practical and directed to me specifically.* (Jyrhämä, in press). When Miettinen (1995) studied the usefulness of recipes, the average on a seven-point scale describing the usefulness of all the recipes was 4.7, which the researcher considers quite high.

The students who found the received advice useless mentioned reasons such as their own independent way of working, the advice was too situational or not easily generalizable, too much attention to details and matters of taste: *Not very; the advice too situational, detailed and sometimes matters of opinion.* In cases where the usefulness of the advice was found varying, the reason could be the varied quality of the advice received from the different supervisors, the varying degree of applicability in different supervisory situations such as group supervision or lesson feedback. The following comment deals with both usefulness and uselessness: *The class teacher's advice has been very useful, but the advice from the supervisors is often too high-flown.* One special characteristic came up in regard to the usefulness of the recipes, namely the different requirements of concreteness and abstractness: While some students especially require concreteness, others consider it a hindrance and value only abstract recipes of a very general and theoretical level. The answers reflected both positive and negative views on the concreteness and abstractness of the recipes. The recipes were experienced negatively particularly when they were too detailed or hair-splitting, so to speak. The concrete-abstract dimension was weighed somewhat towards the concrete. (Jyrhämä, in press).

The interview probed more closely than the questionnaire how useful the students find the advice and guidelines received in the course of teaching practice and how they justify their opinion. In addition, the students were asked whether they followed the received recipes and whether it was worthwhile to follow them. To an extent, the usefulness of the recipes and following them seems to depend on the giver of the recipes and on the student's prior teaching experience with which to compare the practicality of the recipes. Thoroughness and accuracy of supervision and the expression of positive aspects contribute to making the student's attitude towards the recipes positive. Some students lacked teaching experience and that is why they find the received recipes useful. The recipes have to be detailed enough; abstract recipes are bad, for they leave the student in a haze as to what to do next. The student's self-reflection may lead her/him to the same conclusion that the supervisor has drawn from her/his performance. Self-knowledge would seem to favour the acceptance of the recipes. The supervisor with her/his expertise may succeed in directing the student's attention to relevant points and in starting the student's self-reflection. The singling out of relevant points in teaching contributes to a favourable basis for supervision. Copeland and D'Emidio-Caston (1998,

518-521) examined the changes that take place in the different components of student teachers' practical theories. They stated in their analysis that educational purposes and their proper recognition became more pronounced with the broadening of teaching experience and proved to be the most important explicators of changing practical theories.

The recipes are found more useful if the supervisors' recipes are clearly tied up with the student's personality and if they are in direct relation to her/his way to act. According to Talvitie, Peltokallio and Männistö (2000), research findings show that the quality of interaction is a very central factor in the supervisory process. Personal chemistry has a decisive role in supervision. The issue of the quality of human interaction is linked with professional evaluation: if personal chemistry works out well, the supervisor is believed to also be professionally competent. A supervisor with very strong views on the class dynamics is not liked. In studying advice, Heritage and Sefi (1992) deal with two structuring dimensions. Firstly, advice and its reception are a paired action. The relevant action after advice is a response. Secondly, advice deals with, or makes relevant, a particular problem or problem area. The most basic feature in the teaching-studying-learning process is action, but not the action of some individual *per se* but the interaction of all the persons who participate in the process. Interaction in the teaching-studying-learning process can accordingly never be symmetrical. However, it can be as democratic as possible within these conditions. (Kansanen et al., 2000.)

Do the supervisors have arguments when they justify their educational decisions. What are the arguments like? Theoretically they are supposed to be intuitional or rational. Or are they mixed?

How the supervisors justify the teaching recipes given in teaching practice, or do they justify at all?

The justifications are not provided if they are not especially asked for

What I am looking for, are the justifications behind teaching recipes. Supervisors – or teachers in general – make decisions which are partly based on theoretical knowledge, mainly with normative premises consisting of the values, aims and goals behind the practical solutions. Kindsvatter et al. (1992, 1-19) sees a personal belief system behind decisions. They divide the personal belief system into two bases, the intuitive and the rational. The very point of decision-making turns the descriptive thinking towards the normative side; and in addition to the knowledge base, many other factors have an influence on this process. The most important thing is not to analyze the content side of this thinking, because, in principle, any theme can bring out how teachers justify their decisions. It is rather the system and organization of the teacher's theoretical thinking that is of interest. In many contexts it has been noticed that teachers did not provide any justifications if not especially asked for.

Seeking the justifications: intuitive basis

It is possible to try to find out justifications for decisions following the flow of teachers' talk. In that case the justifications are not purposely requested. In my research, the teachers, mostly supervisors, were in specific asked for their justifications and could write them down. In a supervisory discussion, it is usual that the supervisors use a great number of normative arguments and give direct advice which they back mostly with intuitive reasons. These are usually based on personal and practical experiences, and they can be interpreted as common-sense expressions. *"Because I have found them*

good" is an example of this kind. In another example, the same kind of experiential knowledge is exposed as follows:

> *In my opinion all recipes are derived from practical situations. They have not been drawn at the desk. They are not opinions of a supervisor but observations based on student behaviour from countless lessons. These things dealt with in the supervisory process are thus the result of a long product development. The students notice this quite rapidly when they see that the advice works in practice. Differences of opinion of good teaching among supervisors are not a problem because the supervisors know that practical knowledge cumulates through practice.*

In addition to personal and practical experiences, habits and routines are also found in the justifications: *"The reason for this was how to get things to work in practice."* Examples and generalizations also turn up to some degree: *"I justify the advice with examples from my own work. Or I tell how and in what situation I myself have acted as I have described."*

Johansson and Kroksmark (2000) speak about teacher intuition or didactic intuition. They notice that didactic intuition as an aspect or a quality in educational practice is quite seldom focused by researchers. Teachers themselves speak about intuitive didactic action and regard it as pure professional part of teaching. Intuition is inexpressible, but it exists in the work of teachers. Johansson and Kroksmark (op.cit. 55) are starting with the assumption that intuition in teachers' work is something that can be scientifically studied. They are testing, too, the possibility to understand didactic intuition as a category-defined teaching methodology. What comes to the nature of didactic intuition, the writers see its fundamental characteristics so based on experience and oriented in action. They write: "Afterwards we may ask ourselves how we 'knew' how to act. The answer is often intuition; we do something we are unaware of, and we do not know where it comes from nor where it leads, but probably our intuitive acting is some kind of reflection or transformation of previous ordinary educational or professional experiences." The center of didactic intuition is put in relation to the didactic competence of the teacher (op.cit. 59, 65).

Van Manen (1991, 208) ties intuitive knowledge together with tacit knowledge emanating from experience: "...intuitive knowledge that the teacher may learn from personal experience, or through apperenticeship with a more experienced teacher." Dreyfus and Dreyfus (1988, 28) for their part claim that intuitive acting is an expression of what they call 'know-how'. However, the intuition, seems to be very central when supervisors justify the advice they have given to the student teachers. It would be very interesting to know how often intuition leads to the right decision. It is not easy to clarify that because there can be several right decisions and they, by their nature, are normative, too.

Seeking the justifications: rational basis

In addition to intuitive arguments, another category of justification is theoretical knowledge, or rational thinking in general. This may also be called reasoning. Cause and grounds as a subcategory of rational arguments may turn out as follows: *"I indeed give direct advice and guides in questions of safety."* Sometimes the supervisor has found facts to be sufficient justification: *"Physiological arguments (the function of the brain, the function of the eyes, the function of the ears)"*. An argument quite close to the physiological one is ergonomy: *"The technical and economic reasons - reasonable conditions of work"*.

One of the most central rational arguments is research knowledge. Such topics as developmental psychology as a justificatory basis when making decisions on aims and goals, content, and teaching methods can be found. *"Children's learning strategies"* is a typical argument. The knowledge acquired in one's own studies is also common: *"When we talk about teaching methods and about their usefulness etc., I apply the knowledge I have got in my own studies."*

In various situations during practice teaching and in evaluating learning results, the aspects of evaluation and reflection are also mentioned. *"I have understood it as my duty in supervision in general to reflect my decisions with questioning – for example, why the various decisions are justified."* When one's own behaviour is expanded to act as an example for the students, we can think of it as a rational way to back the advice: *"You are a model for your students. The students easily do the same as you do".*

A rational basis of justification presupposes that the knowledge claims which teachers use have epistemological standards which the teachers regard as adequate for justifying their pedagogical ideas and actions. Typical of the rational bases are pedagogical principles, research findings, scholarly contributions and examined practice. They are results of logical thinking.

Mixed patterns of justification

When the reasons given by teachers for making educational decisions were analyzed, it was supposed that the arguments lying behind supervisors' decisions would be intuitional or rational by nature. Quite soon it became clear that mixed arguments must also be taken into consideration and that the oversimplifying division must be elaborated.

In the following examples, I have sought both intuitive and rational arguments in the advice given during the supervisory discourse, because quite often both kinds of justifications were given in the same discussion; such mixed patterns contained many-sided arguments like the following: *"My arguments vary according to the topic of action which is under discussion. I try to differentiate my views depending on their being generally accepted or only subjective, or if it is possible to find some facts based on research."* In practice, however, the supervisor and the teacher act all-inclusively without thinking about how each piece of advice may be justified:

> *"Generally, I justify my advice by appealing to general didactical and educational conceptions concerning the problem presented. I make quite a lot of use of my somewhat short but fruitful experience, Sometimes balanced adult common sense is helpful for observing things which are brought to a discussion; advice and justifications are not needed."*

In some cases, the supervisor has specified more accurately both intuitive and rational justifications and has also mentioned some details. These kinds of arguments may contain almost all possible ways of justifying the decisions, and they reflect a deep thinking over teaching:

> *There are some things (the use of blackboard lights, the use of an overhead projector, the things which are connected to the size of the text on the board, to the clarity of making the presentation concrete) which I indeed justify by saying that it is a fact that writing on the board in big letters is more visible than writing in small letters or that I myself have found the argument to be true or someone else has found it true. Of some things I say that there is no one right way to teach, everyone has to choose the one which is in line with her/his personality; on the other hand, I have arrived at my own way of action from my experience of fifteen years as a teacher: the base is thus the practical experience and in par-*

> *ticular my nine-year experience in practical field work: I suppose that I know quite well what is waiting my student teachers. In the course of years and in my studies, I have, of course, happened to read many kinds of texts; various kinds of research results give hints. I sometimes cite them or I tell my students that I have read that somewhere. The years of supervision have naturally taught me, or at any rate I hope they have.*

In short, when both ways of arguing are used, the expression may be quite simply: *"I justify the advice I give with my experience of teaching and on the basis of my knowledge".*

Mixed patterns of justification show how thinking easily involves both heart and brains, sense and sensibility, so to speak. Combining the theoretical and practical knowledge is natural in any context. Often it is very difficult to say which one in a given situation is prior. In academic contexts, we often pay more attention to reasoning, it seems perhaps to be a more objective, scientific and explicit way to justify our action. Intuition in its part will often be seen a more subjective, unscientific and implicit way to make decisions and act. Acting in such interactive contexts -- i.e. teaching - studying – learning process – makes special demands on the person supervising the process. Her/his theoretical knowledge alone is not enough in the interactive process; it is necessary, too, to recognise the situations in which the knowledge can be used. To notice this, it is usually necessary to have intuitive knowledge. When a man has the situational intelligence and can combine theoretical and practical knowledge, it is perhaps possible to speak about wisdom.

Justification of advice is a moral and responsible way to act. In this way, the student gets the opportunity to understand where the supervisor's point of view originates. The argumentation can be developed to pedagogical discourse by means of which the typical terminology for the profession comes into being. The main interest in examining the advice and recipes which are presented in student teaching is how they are justified or whether they are justified at all. Usually the teaching recipe does not include justifications. These are expressed separately if necessary. If the idea of a recipe is made conscious and if its justification is insisted on, the teacher's pedagogical thinking may become more advanced. Only some justifications are clearly based on theorizing of teaching. Instead, they usually reflect the teacher's personal beliefs about good teaching and are intuitive by nature. Behind these recipes may lie reasonably good knowledge of educational theory and thus a rational basis for the justification of the recipes. My results incidate, however, that teachers justify both intuitively and rationally, and usually they have a mixed pattern where both sides are combined as an integrated whole.

Supervising teaching practice is intuition and reasoning – and as such a highly skilled job

The quality of the supervisory relationship has its immediate influence on supervisory atmosphere and on the work of both participants. Particularly sensitive the relationship is in a situation where the supervisor is exercising power over the student by means of teaching skill grading. On the other hand, this power and a certain asymmetry do exist even without any assessment, for the supervisor represents the teaching profession in any case. S/he is the expert, who has (or should have) more knowledge, skill and experience than the novice. The interaction of an expert and a novice can be symmetric on certain conditions, one of the most central being that both parties are allowed to say what they think (cf. Kansanen, 1991, 90-91). Furthermore, the supervisory relation should include respect and consideration for each other. Typical of a succesful supervi-

sory relationship is: trust, ethical way of action, student's own activeness and symmetry of interaction (Jyrhämä, in press).

The supervisors of teaching practice have had their share of responsibility. The basic prerequisites are expert knowledge and teaching skills. Yet, a successful supervisory relationship seems to culminate most crucially in the quality of interaction. Some university teachers seem to be born pedagogues, others do not seem to be able to learn by any teaching methods (cf. Jyrhämä, 1999b). It is not impossible to give advice on the subject (see McKeachie, 1999). The supervisor's expertise might be better appreciated if there were only a small number of students to supervise at a given time. University teachers have more often than not met their students in the course of theoretical studies, so on the basis of their knowledge of the students and by means of adequate personal discussions they should, in each case, be able to recognize the student's individual needs and adapt their supervision to the student's developmental phase. The giving of advice and guidelines is a supervisor's intervention in the student's study process. Obviously, it would be beneficial to find the right rhythm for different interventions, for de Jong et al. (1998, 55) noticed, while developing the model for learning from practice, that changing deep-rooted learning orientations is slow. This implies, among other things, that students with non-reflective thinking modes may experience that they are not learning anything at all if the speed is too high. The skills of teaching develop by stages.

Olson and Bruner (1996) speak about everyday conceptions of psychology and pedagogy as background influences. They see these as intuitive theories or conceptions of how a pupil's mind works and how s/he could be taught. The pupil's way of learning and developing is clarified from a psychological framework. The conceptions of how to help children to learn are examined from pedagogical starting points. From the view of psychology and pedagogy, Olson and Bruner propose four different metaphors for a learner: *doer*, *knower*, *thinker* and *expert*. In good teaching, all the metaphors are needed because from the cognitive point of view there is a need for certain basic skills to become automated so that an individual learner could free enough resources for a higher level of problem-solving. Asking for advice is one stage in learning - not only with children but also with students.

Intentionality and reflectivity would seem to support the development of pedagogical thinking towards expertise typified by the speed and effectiveness of thought. This development is characterised by the organization of one's specialist knowledge into entities including skills (Chi, Glase & Farr, 1988). According to Järvinen et al. (1995), the development of students' reflective skills can be accelerated by starting teaching practice right at the beginning of studying. The task of the supervisors is to systematically advance the development of critical consciousness. The Finnish research-based teacher education should provide good starting points for student teachers to develop an independent and critical attitude to knowledge and its evaluation, because the student knows how scientific knowledge is produced and how to produce it her/himself. Critical reflection of the advice and guidelines received in supervision should not be beyond her/him. Personal reflection is important in that the advice and guidelines given by the supervisors are naturally linked with the context in which they are given, not forgetting the context in which they can be applied. (cf. Meyer, 1991, 49 [1st ed. 1980]; Drerup, 1988, 114.) Some of the recipes are again generalizing, anticipatory by nature. The reflection of recipes determines the practicability of the advice. (Reflexion von Rezepten, cf. Meyer, 1991).

The teaching profession is connected with the teacher's ability to seek and produce professionally relevant knowledge which enhances a teacher's autonomy and abil-

ity for decision-making. In the process of becoming a professional practitioner, the teacher produces and justifies the recipes concerning teaching mainly for her/himself. The teaching practice supervisor in a supervisory situation states her/his opinion of what should be done in the situation. The giving of recipes can be seen as a projection of what the supervisor her/himself would do in a similar situation. It is a question of directing the student's attention to points relevant to teaching and of making the student conscious of the practicability or impracticability of his chosen way of action. This is further accompanied by offering alternatives by means of justification and explication (see e.g. von Wright, 1996, 356.) When teaching or when supervising the student in teaching, the expert is able to take into account many simultaneous phenomena and to make correct assessments and decisions in a given situation.

The student gets a good opportunity to analyze the supervisor's justifications and an opportunity to form an independent opinion of them if the supervisor sets out the underlying justifications. It is also only fair to admit if a conclusion is the result of one's own experience. The student can then test the supervisory ground and question more closely the supervisor's way to act. The crucial question is how to improve the quality of teachers' pedagogical thinking. The decision made in Finnish teacher education is research-based teaching. A reflective teacher is one who uses the principles of research in her/his thinking in making decisions but is not a professional researcher. It is a professional attitude to justify the practice with arguments like ones used in genuine research work. In teachers' pedagogical thinking this means higher quality of justification in educational decisions. To justify one's own work is a moral and responsible way to act.

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